

he considers some of the publications of men referred to above, that one must differentiate between annual rings and lesser growth-rests which are produced with a temporary cessation in growth due to unfavorable circumstances. In a species such as *Anodonta cataracta* Say, shell growth may be very rapid when the animal lives under favorable conditions. During such rapid growth, disturbances of the animal may be registered on the shell as growth-rests. If Dr. Bartsch is unable to interpret properly his experimental results, the burden of disproving earlier work rests with him.

A NEW SPECIES OF *POLYGYRA* FROM THE GREAT SMOKY MOUNTAINS, NORTH CAROLINA

BY ALLAN F. ARCHER

POLYGYRA (*MESODON*) *JONESIANA*, new species. Plate 10, fig. 6.

Description.—Shell rather small, imperforate, rather solid, subglobose, concave in the umbilical region, dull and faintly hirsute. Color light chestnut; nuclear whorl eroded, dirty white. Parietal lamella white; peristome white edged with a faint reddish brown. Whorls, $5\frac{1}{4}$, gradually increasing; gently convex; nuclear whorl nearly flat. Suture impressed throughout. Body whorl gently bulging behind the peristome; area immediately behind the peristome deeply impressed. Aperture oblique, lunate. Peristome rather narrow except in the basal area, reflected; edge of peristome rather sharp; surface of peristome dished and concave directly above the anal sinus; the rest of the surface convex. Outer denticle present in the form of a slight, rounded boss; basal denticle, a faint curve inwards towards the parietal wall, and nearly continuous with the thickened, undifferentiated rim of the basal peristome. Parietal lamella rather prominent, slightly curved, and robust; the proximal portion of the lamella much more elongated than the distal portion. The umbilical region covered by a broad callus, rather impressed. The nuclear whorl and the two succeeding whorls covered with faint, irregular, axial riblets. The fourth whorl and the body whorl covered with rather widely spaced axial riblets which tend to become faint below the periphery in the region just above the parietal callus. From about the third whorl onwards to the groove behind the peristome the shell covered with spirally disposed longitudinal pits surmounted by cuticular laminae; these laminae in a staggered arrangement. The entire surface of the peristome, parietal lamella,

and parietal callus covered with very closely set and very fine beading. Holotype: height 7.5 mm.; greater diameter 12.8 mm.; aperture 3×5 . Paratypes: height 8.5; greater diameter 13–13.5; aperture (of one mature specimen) 3×5 mm.

Holotype.—A. N. S. P., no. 169583, 4800 feet elevation, near New Found Gap, Swain County, North Carolina, $2\frac{1}{8}$ miles south of Mount LeConte. Three paratypes from the same locality. A. F. Archer collector, September 8, 1937.

Remarks.—This species belongs somewhere between *P. clarkii* and *P. christyi*, but is nearer the former. It differs from *clarkii* in the following respects: The peristome is proportionately narrower; the basal denticle is less angular; the upper denticle, absent in *clarkii*, is faintly represented in this species; the surface is covered with spiral laminae, absent in *clarkii*; the spire is not elevated, as in *clarkii*, and there is at least one less whorl. Besides its much smaller size *P. christyi* has no denticles, lacks the cuticular laminae, and has at least one half less whorl, thus contrasting with *jonesiana* in these respects. *P. subpalliated*, although hirsute like *jonesiana*, has the hairs arranged as zigzag, continuous, axial laminae; it has a flatter spire and one less whorl; it lacks the upper denticle, and the surface of its peristome is flattened instead of being convex; the inner rim of the basal peristome is narrow and bordered by an indented groove.

It is unfortunate that only three specimens of this rare and apparently endemic species are available for diagnosis. I found all three specimens in a very limited area during a field trip in company with H. E. Wheeler. Possibly the seasonal conditions were unfavorable for finding this snail alive. One of the adults was freshly dead, but the soft parts were already disintegrated, and were consequently not available for dissection.

This species is named for Dr. Walter B. Jones, of the Alabama Geological Survey, who has always shown great interest in the geological and biological work in the southeastern United States.

Habitat.—This snail inhabits the birch-beech-maple-hemlock forest of the higher elevations. Characteristic trees are *Tsuga canadensis*, *Betula lutea*, *Acer rubrum*, *A. spicata*, *Fagus grandifolia*. *P. jonesi* does not occur in the talus of massive, moss-covered rocks of the *Polygyra ferrissii* zone, but instead lives in

the humus zone. Its habitat is under the top layer of leaves and hemlock spills, or under bark and logs in a cover of fallen limbs and twigs.

NOTES ON *HYGROMIA STRIOLATA* (PFR.) AT
TORONTO, CANADA

BY JOHN OUGHTON
Royal Ontario Museum of Zoology

This European land snail, also known under the names *Helix rufescens* (Penn.), *Fruticola rufescens* (Penn.) and *Trichia striolata* (Pfr.) has for many years been established at Quebec City. (J. F. Whiteaves, "On the land and fresh water mollusca of Lower Canada," Can. Nat. & Geol. 6: 452, 1861). A colony of this same species has been recently discovered at Ottawa by Mr. G. E. Fairbairn. (Can. Field-Nat. in press). Mr. A. LaRocque kindly pointed out to me that Justice F. R. Latchford (Ottawa Nat. 7: 132, 1893) many years ago secured a batch of this species from Quebec City and liberated them in Ottawa. However, Mr. LaRocque considers that the existing Ottawa colony has probably been derived from some other source.

The purpose of the present paper is to record the occurrence of *Hygromia striolata* at Toronto, to suggest its probable source, to indicate its present extent and abundance and finally to mention some observations, chiefly on the pigmentation of shell and mantle.

I am indebted for assistance to Professor J. R. Dymond, Mr. A. LaRocque and my wife.

Occurrence.—The Toronto colony was discovered by my wife and myself in November, 1937. *H. striolata* has apparently lived unnoticed for several years here. Such neglect is not strange, as the species is confined to a small extent of waste land. However, it is possible that it has been noticed before, but under the wrong name. Thus Robertson ("Mollusca" in Natural History of the Toronto Region, 1913, p. 289) lists "*Gastradonta ligera* Say" for the Toronto region—an unlikely record which has never been authenticated. His *G. ligera* was based, I believe, either on *H. striolata* or on an immature specimen of some *Polygyra*.